



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/075,180	02/13/2002	Jeffrey Duane Vance	H49.12-0003	7284

27367 7590 06/29/2005

WESTMAN CHAMPLIN & KELLY, P.A.  
SUITE 1400 - INTERNATIONAL CENTRE  
900 SECOND AVENUE SOUTH  
MINNEAPOLIS, MN 55402-3319

EXAMINER
----------

RAYFORD, SANDRA M

ART UNIT	PAPER NUMBER
----------	--------------

1772

DATE MAILED: 06/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.



UNITED STATES DEPARTMENT OF COMMERCE

U.S. Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
---------------------------------	-------------	---	---------------------

EXAMINER
----------

ART UNIT	PAPER
----------	-------

20050616

DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner for Patents

Enclosed is a revised Examiner's Answer, which addresses the errors discussed in item I, on pages 1 and 2, of Applicants' 13 April 2005 Reply Brief.

The arguments in items II through VI of the Reply Brief will not be addressed here; the Examiner's Answer is deemed sufficient to state the Office's position on the issues raised/repeated there.

*S. M. Nolan-Rayford 6-24-05*  
S. M. Nolan-Rayford  
(10075180(20050616))

SANDRA NOLAN RAYFORD  
PRIMARY EXAMINER

Art Unit: 1772



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents  
United States Patent and Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/075,180

Filing Date: February 13, 2002

Appellant(s): VANCE ET AL.

Deidre Megley Kvale, Esq.  
For Appellant

**EXAMINER'S ANSWER**

**MAILED**  
JUN 30 2005  
**GROUP 1700**

This is in response to the appeal brief filed 18 November 2004.

**(1) *Real Party in Interest***

A statement identifying the real party in interest is contained in the brief.

**(2) *Related Appeals and Interferences***

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

**(3) *Status of Claims***

The statement of the status of the claims contained in the brief is incorrect. A correct statement of the status of the claims is as follows:

This appeal involves pending, non-withdrawn claims 1, 3-14 and 30-36.

No claim has been allowed.

Claim 4 is objected to for a grammatical error.

Claims 6 and 10\* are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

\*Note: Claim 10 is currently objected to in view of the withdrawal of the 35 USC 112, first paragraph rejection thereof. See item (6), "Issues".

Claims 15-29 have been withdrawn from consideration as not directed to the elected invention.

Claim 2 has been canceled.

Art Unit: 1772

**(4) *Status of Amendments After Final***

No amendment after final has been filed.

**(5) *Summary of the Claimed Invention***

The summary of invention contained in the brief is correct.

**(6) *Issues***

The appellant's statement of the issues in the brief is no longer correct. Several grounds of rejection have been withdrawn. Several rejections and the objection to claim 14 have been maintained, as follows:

**A. Rejections Withdrawn**

The 35 USC 112, first paragraph, rejections of claims 10, 13, 14, 30 and 32-34 have been withdrawn in response to the arguments presented the passage beginning at page 4, line 1 and ending at page 8, line 9 of appellants' brief. Those arguments have been found persuasive.

**B. Rejections Maintained**

The 35 USC 112, second paragraph, rejection of claim 3 as indefinite is maintained for reasons of record.

The 35 USC 103 rejection of claims 13-14 as unpatentable over Fortier, Gould and Rousseau is maintained for reasons of record.

The 35 USC 103 rejection of claims 1, 4-5, 7-9, 11-12 and 30-36 as unpatentable over Widder in view of Fortier et al and Gould is maintained for reasons of record.

**C. Objection Maintained**

Art Unit: 1772

The objection to claim 14 for the use of "a aramid" is maintained for reasons of record.

**(7) Grouping of Claims**

Claim 3 has been rejected under 35 USC 112.

Claims 1, 4-5, 7-9, 11-14 and 30-36 have been rejected under 35 USC 103.

**(8) Claims Appealed**

The copy of the appealed claims contained in the Appendix to the brief is correct, with one minor exception.

Claim 14, as recited on page 16 of the brief, does not recite an article before the word "aramid".

The current text of claim 14 is recited on the penultimate page of this answer.

**(9) Prior Art of Record**

4,810,559	FORTIER et al	3-1989
5,072,453	WIDDER	12-1991
5,200,263	GOULD et al	4-1993
5,789,327	ROUSSEAU	8-1998

**(10) Grounds of Rejection/Objection**

The following ground(s) of rejection/objection are now applicable to the appealed claims:

Claim 3 is rejected under 35 U.S.C. 112, second paragraph. This rejection is set forth in a prior Office Action, mailed on 11 May 2004.

Art Unit: 1772

Claims 13-14 are rejected under 35 U.S.C. 103, as unpatentable over Fortier, Gould and Rousseau. This rejection is set forth in a prior Office Action, mailed on 10 October 2003.

Claims 1, 4-5, 7-9, 11-12 and 30-36 are rejected under 35 U.S.C. 103, as unpatentable over Widder in view of Fortier et al and Gould. This rejection is set forth in a prior Office Action, mailed on 11 May 2004.

Claim 14 is objected to because of the following informalities: the phrase "a aramid" is not grammatically correct.

**(11) Response to Argument**

**A. The 35 USC 112, first paragraph rejection(s) – withdrawn above**

The 35 USC 112, first paragraph, rejections of claims 10, 13, 14, 30 and 32-34 have been withdrawn in response to the arguments presented in appellants' brief. See item 6 (A), above.

**B. The 35 USC 112, second paragraph rejection**

On page 8 of their brief, appellants argue against the 35 USC 112 rejection of claim 3.

Appellants argue that the phrase "elastomeric or polymer material" in claim 3 is not indefinite because the recitation of "or" does not render claim 3 indefinite.

However, consistent with MPEP 706.03 a term may not be given a meaning that is repugnant to its usual meaning.

Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine

Art Unit: 1772

the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999).

In claim 3, appellants recite “or” between “elastomeric” and “polymer” indicating, based on the plain meaning of the term “or” that the expressions are alternatives. However, appellants do not recite definitions of these terms in their specification to support a conclusion that either elastomeric or polymers are to be used.

The term “elastomeric” in claim 3, line 2, is used by the claim to mean “not polymer”, while the accepted meaning is “having the properties of an elastomer.” The term is indefinite because the specification does not clearly redefine the term.

Likewise, the term “polymer” in claim 3, line 2, is used by the claim to mean “not elastomer”, while the accepted meaning is “containing multiple mers.” The term is indefinite because the specification does not clearly redefine the term.

Since many elastomeric materials are also polymers, the use of “or” between these term gives them meanings that are repugnant to their usual meanings and is, therefore, basis for a proper indefiniteness rejection under 35 USC 103.

In sum, it is improper, under 35 USC 112, second, to refer to terms that do not exclude each other in the alternative without providing definitions in the specification that support their use as alternatives.

C. The 35 USC 103 rejection of claims 13-14



Art Unit: 1772

On pages 8-10 of their brief, appellants argue against the 35 USC 103 rejection of claims 13-14 as unpatentable over Widder in view of Fortier, Gould and Rousseau.

A brief summary of claims 13-14 and the rejection follows:

Claim 13 covers a material comprising:

- opposed flexible layers formed of elastomeric or polymer film or material,
- a seam connecting a portion of the layers to form a pocket therebetween,
- a penetration resistant fabric or material floatably disposed in the pocket with respect to the layers.

Claim 14 depends on claim 13 and calls for an aramid or high density polyethylene fabric.

Widder teaches a bulletproof body protection system that has a plate **70** between front wall **74** and rear wall **76** in pocket **78** (see Figure 3 and col. 4, lines 33-40). The walls **74** and **76** are connected via what appear to be seams (see Figure 3).

At col. 5, lines 50-54, Widder teaches that the cage that holds the bulletproof plates can be laundered after the plates have been removed.

It is clear, then, that Widder envisions the use of cage materials that are flexible enough to be cleaned by laundering. Appellants acknowledged this teaching at page 9, first full paragraph of the brief.

The examiner has acknowledged that Widder does not teach multiple epoxy resin plates in/on an array between elastomeric walls. See page 5, third paragraph of the 10 October 2003 office action.

Art Unit: 1772

Fortier teaches multiple epoxy platelets (col. 3, lines 47-54) secured to a fabric (col. 2, lines 64-65) in a protective web (abstract). The platelets may be secured in a array or on the fabric (Figures 2, 3a and 3b). Multiple platelets let the web yield when the wearer moves (col. 1, lines 34-40).

Gould teaches gloves that protect wearers' hands from punctures or cuts (abstract), which gloves contain a composite including multiple hard platelets (col. 4, liners 34-36) embedded (col. 7, lines 9) in a polyurethane layers **15** (col. 7, lines 23) sandwiched between two elastomer layers **30** (col. 10, lines 4). The platelets may in orderly patterns (col. 5, lines 35-58) of in offset groupings (col. 5, lines 57-58). The platelets may be in pockets within layer **15** to permit the layer to flex and stretch about them (col. 7, lines 28-31).

Rousseau teaches laminates made of KEVLAR (i.e., aromatic polyamide) of SPECTRA (i.e., ultra high molecular weight polyethylene) fibers (col. 4, lines 55-56) in a ballistic panel (abstract) for a ballistic resistant vest (Figure 1). It teaches ballistic resistant garments that are thin and light (col. 4, lines 46-50).

The references are analogous because they all deal with protective garments.

The motivation to combine the epoxy platelets and composite structure of Fortier and Gould in Widder's protection system is found at col. 1, lines 34-40 of Fortier and at col. 7, lines 28-31 of Gould, where Fortier's web is said to permit movement and Gould's composite is said to allow the inner layer to flex and stretch.

Art Unit: 1772

The examiner deems it obvious to employ the laminates of Rousseau along with the platelets in the garments of Widder, Fortier and Gould in order to enhance the penetration resistance thereof.

On pages 9 and 10 of the brief, appellants argue that it is not obvious to modify Widder in view of Fortier and Gould to form a pocket element for Widder's bulletproof plate **70** having elastomeric walls because Gould does not form a pocket.

However, Gould teaches elastomer layers surrounding penetration resistant platelets embedded in polyurethane layers. This is deemed suggestive of the use of elastomers to enclose, or hold penetration platelets.

Note, too, that Gould teaches that its platelets may be in pockets and that both Widder and Gould teach pockets that hold their penetration resistant elements/platelets.

Clearly, Gould and/or Widder suggest the use of pockets for their elements/platelets and Gould suggests elastomeric walls surrounding same.

On page 10, appellants argue that Gould's composite does not include embedded encapsulated pockets in an elastomer layer or a pocket element mounted on a suspender-like system to hold a bulletproof plate, as shown by Widder.

However, both Gould and Widder deal with protective clothing. It is enough that they are analogous. The features of one do not have to mirror the features of the other.

Also on page 10, appellants argue that the objects of Widder are different from those of Gould. Widder wants to protect from gun-related injury, while Gould want to protect from lacerations or punctures of the skin.

Art Unit: 1772

However, the examiner notes that bullets cause lacerations and/or punctures. Accordingly, protecting the wearer from the bullets will also protect him from lacerations and/or punctures.

Lastly, appellants argue, on page 10, that the Widder garments can be cleaned after the protective elements have been removed from it, while Gould does not teach removable elements.

However, the provision of pockets—per the teachings of both Gould and Widder—means that the elements/platelets of either can be removed so that the supportive garment can be cleaned/handled in any way the consumer desires.

Finally, appellants have not convincingly argued or demonstrated that differences in the “object(s)” of the Widder and Gould references renders their teachings uncombinable under 35 USC 103.

D. The 35 USC 103 rejection of claims 1, 4-5, 7-9, 11-12 and 30-36

The examiner notes that all of the claims may be considered together because appellants did not recite claim groupings in the brief. See item (7), above.

On pages 11-14 of their brief, appellants argue that the rejection of claims 1, 4-5, 7-9, 11-12 and 30-36 under 35 USC 103 is not proper.

A summary of the rejected base claim, i.e., claim 1, is appropriate here.

Claim 1 covers a material comprising:

- opposed flexible layers,
- a seam connecting a portion of the layers to form a pocket therebetween,

Art Unit: 1772

- a resistant infrastructure including an array of spaced, penetration resistant plates in the pocket between the layers.

The Widder, Fortier and Gould references are discussed above.

On page 11 of the brief, appellants argue that the rejection is improper because Gould does not teach or suggest a pocket element to hold a bulletproof plate in accordance with Widder's main object.

The examiner maintains that the main objects of properly combinable references can differ as long as they are analogous. Appellant has failed to demonstrate that the Widder, Fortier and Gould references are nonanalogous.

On pages 11 and 12 of the brief, appellants argue that there is no motivation to combine the body protection system of Widder in view of Gould and Fortier.

However, the motivation to combine the epoxy platelets and composite structure of Fortier and Gould in Widder's protection system is found at col. 1, lines 34-40 of Fortier and at col. 7, lines 28-31 of Gould, where Fortier's web is said to permit movement and Gould's composite is said to allow the inner layer to flex and stretch.

On page 12, appellants argue that there is no motivation to provide a cut or puncture resistant platelet, as taught by Gould nor a wear or abrasion-resistant platelet as taught by Fortier to provide protection from gun-related injury.

As was mentioned earlier, a gun produces a puncture or laceration wound. Accordingly, the use of Gould's platelets is obvious.

On page 12, appellants argue that Gould does not teach or suggest a "polyurethane pocket".

However, the claims do not call for a polyurethane pocket. They merely call for flexible layers that may be made of polyurethane material. The layers could be patchwork arrangements in which the connected portions thereof are not made of polyurethane materials.

On page 13, appellants argue that Gould does not show platelets that are floatably disposed in its pocket.

The examiner has not found the term “floatably” or any derivation thereof in the Gould patent. Nonetheless, it is clear that the Gould platelets move.

Gould discusses, at col. 7, lines 25-36, the phenomenon of “decoupling” and says that platelets can be contained within “encapsulating pockets in the elastomer to thereby allow the surrounding material to flex and stretch about the platelets . . . without restriction” [quoted from col. 7, lines 29-31]. Thus, the elastomer need not be connected to the platelets and, as the elastomer moves, the platelets may move as well.

Also, Gould teaches that its platelets can “pivot” within its composites. See col. 10, lines 52-55. The ability of its platelets to pivot indicates that they move.

The examiner deems the movement of Gould’s platelets to be suggestive of the floatable disposition of platelets that appellants claim.

On page 13 of the brief, appellants argue that the combination of Widder, Gould and Fortier does not suggest the presence of a first infrastructure containing flexible layers and penetration resistant elements and a second infrastructure containing similar layers and elements, with the first and second infrastructures joined or sealed to form a composite.

Art Unit: 1772

However, Gould shows such an arrangement in Figure 4 and teaches, at col. 6, lines 20-33, the lamination of two platelet-containing structures to each other.

The examiner deems such lamination to be joining/sealing such that the features of claims 33-34 are suggested.

The examiner notes that the combined teachings of Widder, Gould and Fortier were applied against claims 33-34 earlier. Accordingly, the detailed discussion of the features of claims 33-34 here is not tantamount to a new ground of rejection.

On page 14 of the brief, appellants argue that the examiner's holding that "the use of mesh wire is deemed a matter of engineering choice" without a prior art reference means that the no prima facie case under 35 USC 103 has been made.

However, Fortier teaches a "web" of woven or knitted textile with platelets secured to its surface (abstract).

The Fortier web is deemed a mesh. The use of a wire with would be an obvious means of reinforcing the Fortier web.

One having ordinary skill in the art would apply conventional engineering skill to reinforce Fortier's web with wire and employ the resultant wire-reinforced web in articles suggested by the combination of Widder, Gould and Fortier.

#### E. The Objection to Claim 14

On page 14, in the penultimate sentence in the argument section of the brief, appellant states:

Art Unit: 1772

"Applicants also traverses [sic] the objection of claim 14 on the basis that "a aramid" recites an element not previously mentioned in the claims."

However, section of the 11 September 2004 office action actually says:

"Claim 14 is objected to because of the following informalities: the phrase "a aramid" is not grammatically correct. Appropriate correction is required."

Claim 14, as amended in the 13 February 2004 response, reads as follows:

"14. (Currently amended) The material of claim 13 wherein the penetration resistant fabric is formed of one of a aramid or high density polyethylene."

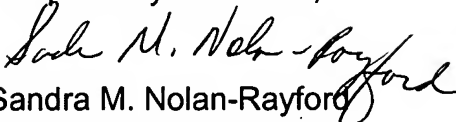
Correct English grammar calls for the article "an" immediately preceding a word beginning with an vowel. Since "aramid" begins with the vowel "a", the correct phrase is "an aramid".

For the above reasons, it is submitted that the rejections and objections of record in this application should be sustained.

[This Examiner's Answer is signed on the following page.]



Respectfully submitted,

  
Sandra M. Nolan-Rayford  
Technology Center 1700  
571/272-1495

SMNR/smnr

June 24, 2005  
10075180(20050207)

Conferees:

Rena Dye 

Harold Pyon 

Deirdre Megley Kvale  
WESTMAN CHAMPLIN & KELLY  
International Centre, Suite 1600  
900 South Second Avenue  
Minneapolis, MN 55402-3319